

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): Device for extraction of pins at fixation means for fixation of bone fragments at bone fractures,

wherein the fixation means (2) includes a sleeve (6) and at least one pin (7) provided in said sleeve (6),

wherein the sleeve (6) at a front end portion (9) has at least one opening (10) in a longitudinal side thereof,

wherein a front part (11) of the pin (7) extends, when said pin (7) is located in an operating position, out of the sleeve (6) through the opening (10) and engage bone material of one of the bone fragments (3, 4), and

wherein the extraction device (1) is adapted to pull the pin (7) in a backwards direction relative to the sleeve (6) in order to withdraw the front part (11) of the pin (7) from bone material of one of the bone fragments (3, 4) and into the sleeve (6),

characterized in ~~characterized in~~

that the extraction device (1) comprises an inner extraction member (12) which is connectable to the pin (7), an outer extraction member (13) which is connectable to the sleeve (6) and in which the inner extraction member (12) is insertable and an extraction handle (14) which is rotatable relative to the outer and inner extraction members (13, 12) in order to extract the pin (7) in a direction (R) of

extraction or withdrawal relative to the outer extraction member (13) and the sleeve (6),

that the outer extraction member (13) is manually holdable in order to prevent that the outer extraction member (13) could rotate when the extraction handle (14) is rotated, and

that the outer and inner extraction members (13, 12) are constructed such that the outer extraction member (13) prevents that the inner extraction member (12) could rotate relative to the outer extraction member (13) when the extraction handle (14) is rotated.

Claim 2 (Currently amended): Device according to claim 1, characterized
in characterized in

that the outer and inner extraction members (13, 12) are provided with rotary preventing members (32, 29), which could cooperate with each other in order to prevent that the inner extraction member (12) could rotate relative to the outer extraction member (13),

that the rotary preventing members (32) of the outer extraction member (13) are non-circular parts of a through hole (33) in the outer extraction member (13), and

that the rotary preventing members (29) of the inner extraction member (12) are non-circular parts.

Claim 3 (Currently amended): Device according to claim 2, characterized
~~in characterized in~~

that the rotary preventing members (32) of the outer extraction member (13) are provided in a rear end portion (31) of the outer extraction member (13), and

that the rotary preventing members (29) of the inner extraction member (12) are provided on a rear end portion 24 of the inner extraction member (12).

Claim 4 (Currently amended): Device according to claim 3, characterized
~~in characterized in~~ that the lengths of the inner and outer extraction members (12, 13) and the location and shape of their rotary preventing members (29, 32) are chosen such that the extraction handle (14) can cooperate with the inner extraction member (12) only in order to draw or pull said inner extraction member (12) backwards in the direction of extraction or withdrawal (R) only when said inner extraction member (12) is inserted into the outer extraction member (13) such that their rotary preventing members (29, 32) cooperate with each other.

Claim 5 (Currently amended): Device according to claim 1, characterized
~~in any preceding claim, characterized in~~ that at least one part (26 and/or 23)
limiting the extraction or withdrawal is provided in order to ensure that the extraction
handle (14), through the inner extraction member (12), can draw or pull the pin (7)
backwards so far relative to the sleeve (6), but not farther, that a tip (35) of the
pin (7) is situated in the opening (10) of the sleeve (6), and can thereby cooperate
with a rear edge of the opening (10) such that the pin (7), through said cooperation
with the rear edge of the opening (10), can draw or pull the sleeve (6) backwards
along with it in the direction of extraction or withdrawal (R) when the sleeve (6) shall
be pulled out of the bone fragment (3, 4) by means of the extraction handle (14).

Claim 6 (Currently amended): Device according to claim 5, characterized
~~in characterized in~~ that said extraction limiting part (26 and/or 23) consists
of that the extraction handle (14) has outer threads (26) with such length and/or that
the inner extraction member (12) has inner threads (23) with such length that the
length of screwing together of the outer threads (26) of the extraction handle (14)
and the inner threads (23) of the inner extraction member (12) is limited.

Claim 7 (Currently amended): Device according to claim 1, characterized
in any preceding claim, characterized in

that a rear part (18) of the pin (7) has outer threads (17),

that a front end portion (15) of the inner extraction member (12) has a
hole with inner threads (16) which mesh with the outer threads (17) of the pin (7),
and

that the hole of the inner extraction member (12) has an inlet (22)
without threads, said inlet (22) tapering conically in a direction inwards into the hole,
and/or

that the rear part (18) of the pin (7) has an outer portion without
threads, said outer portion having a conically increasing diameter in a direction
towards the outer threads (17) of the rear part (18).

Claim 8 (Currently amended): Device according to claim 1, characterized
in any preceding claim, characterized in that the inner extraction
member (12) has front end portion (15) with such outer dimensions or size that it can
be inserted into a rear end portion (8) of the sleeve (6).

Claim 9 (Currently amended): Device according to claim 8, characterized
~~in characterized in~~ that the front end portion (15) of the inner extraction
member (12), which can be inserted into a rear end portion (8) of the sleeve (6),
transforms into inner portions (20) of the inner extraction member (12) having larger
outer dimensions through an edge (19) which can engage a rear edge (21) of the
sleeve (6) when the inner extraction member (12) is operating.

Claim 10 (Currently amended): Device according to claim 1, characterized
~~in any preceding claim, characterized in~~

that the inner extraction member (12) is an elongated rod and has a
front end portion (15) with a hole which is provided with inner threads (16) which
mesh with outer threads (17) on the pin (7),

that the inner extraction member (12) has a rear end portion (24) with a
hole with inner threads (23) which fit or mesh with outer threads (26) on the
extraction handle (14),

that the outer extraction member (13) is an elongated sleeve which is
open in both ends, and

that the inner extraction member (12) fits into the outer extraction
member and is axially displaceable in relation thereto.

Claim 11 (Currently amended): Device according to claim 10,
characterized in ~~characterized in~~ that the inner extraction member (12)
includes lateral holes (36, 37) which extend into the holes with the inner
threads (16, 23) such that said holes can be flushed clean through said lateral
holes (36, 37).

Claim 12 (Currently amended): Device according to claim 1, characterized
in any preceding claim, ~~characterized in~~ that the outer extraction
member (13) has a sideways or laterally directed handle (34) for holding said outer
extraction member (13) such that it does not rotate when the pin (7) is drawn or
pulled out in the direction of extraction or withdrawal (R).

Claim 13 (Currently amended): Device according to claim 1, characterized
in any preceding claim, ~~characterized in~~ that the device consists of only
three members, namely an inner extraction member (12), an outer extraction
member (13) and an extraction handle (14).

Claim 14 (Currently amended): Device according to claim 1, characterized
in any preceding claim, ~~characterized in~~
that the opening (10) in the sleeve (6) is round or oval or substantially
round or oval, and

that the front part (11) of the pin (7) has a rounded side by means of which it can cooperate with front parts of the opening (10), and another side, opposite to said side, which is flat or substantially flat and which can cooperate with rear parts of the opening (10).

Claim 15 (Currently amended): Device according to claim 1, characterized ~~in any preceding claim, characterized in~~ that the sleeve (6) and pin (7) are made of titanium.

Claim 16 (Currently amended): Device according to claim 1, characterized ~~in any of claims 1-14, characterized in~~ that the sleeve (6) and pin (7) are made of stainless steel.